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Dear Ian,

RE: Gas Security of Supply Significant Code Review (SCR) Initial Consultation

E.ON has consistently called for a holistic review of the GB gas security of supply arrangements involving all the key stakeholders including as a minimum; Shippers, National Grid, Health & Safety Executive (HSE), the National Emergency Co-ordinator (NEC), generators and, of course, customers. Whilst we welcome this SCR process, we are concerned that it may not deliver a truly joined-up solution. Certainly some useful progress has been made on certain aspects of the emergency arrangements. In particular, it has been very helpful to understand the views of the NEC and the practical operational and safety implications of some of Ofgem's options outlined in the consultation document.

Before setting out our views on the best way forward for GB gas security of supply, we would firstly like to make some observations on the SCR process to date. It is our view that the three Ofgem / industry workshops were insufficient in duration to really tackle the complex, inter-related issues of a Gas Deficit Emergency (GDE) and merited significantly more industry time than was allocated. Given the time constraints, many critical issues such as maintenance of emergency contact details and the efficacy of existing Shipper incentives such as the Emergency Curtailment Quantity (ECQ) mechanism, although noted, were not sufficiently explored and assessed.

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Overall, our perspective on gas emergency arrangements remains that the market can be relied upon to deliver effective security of supply measures and that any mechanisms which may be introduced in the future should not undermine the market's well-proven track record of delivering even under extremely tight and challenging circumstances. For this reason, we do not believe that radical reform is required in terms of gas security of supply, but that some incremental, market-based changes could have a beneficial impact.

Reinforcing this message, the 2010 Pöyry report “*GB Gas Security and Future Market Arrangements*” states that:

*“Experience of the 2009/10 winter with sustained high demand confirms that the **market has delivered and is working fine**” and that “our **general conclusion is that there is no need to fundamentally change the market**. If it is allowed to work effectively, then the pricing signals can be expected to drive the necessary investment”.*

Whilst the Pöyry report acknowledges there may be room for improvements in some aspects of the market arrangements (in respect of price signals and increased demand side response), importantly, it also notes other policy measures which may have just as much, or more, positive effects on GB security of supply. These include streamlining planning processes, proportionate and consistent regulatory oversight in respect of TPA exemptions and a “*clear statement of the appropriate gas security standards and the resilience that government should have and whose responsibility it is to deliver*”. We believe Ofgem, therefore, should not (and reasonably cannot) attempt to solve all GB security of supply issues just by changing the rules around emergency cashout. Changes which may ultimately be brought forward need be proportionate, providing the right balance between “carrot” and “stick” and without materially worsening the already challenging investment climate (which may be worsened through unduly interventionist measures).

Shippers already face strong incentives to manage their imbalance risks effectively pre-emergency; a point we do not believe is properly recognised in this consultation document. Shippers can be penalised through the ECQ mechanism for not interrupting customers when they should have reasonably done so, through the daily imbalance cashout price and then through a further post-emergency cashout process, which potentially exposes them to additional costs after the event. Given that GB has never faced a gas emergency and that the market has dealt well with supply shocks and record demand to date, we are unsure what risks Ofgem believes are not being properly managed and specifically how any of the options outlined by Ofgem would help materially improve the level of risk management by the Shipper community.

Finally, any potential change to the cashout arrangements should ensure that Shippers maintain their willingness and ability to deliver gas in an emergency. Given the *existing* potentially punitive financial implications, it is not unreasonable to assume that Shippers are

already heavily incentivised in an emergency; although we acknowledge that some tweaks to the emergency cashout process might encourage more timely action in certain circumstances. However, the ability of Shippers to react in an emergency is the key issue to consider. A cashout-driven price arbitrage in favour of the GB market will only deliver results if / when there is physical gas available for delivery in or to GB. Once the supplies have dried up, further price increases will have no impact in terms of improving security of supply.

Our Proposed Way Forward

Having carefully considered the “options” outlined by Ofgem in its consultation document, we do not believe that any one of them, as currently drafted offers a significant improvement over the current arrangements. We do, however, believe that some of the options set out by Ofgem could be improved by taking into account particular market circumstances.

We strongly believe that genuine improvements to the current UNC arrangements can only be achieved when it is recognised that different emergency scenarios present very different challenges; both to the market rules and in terms of practical operation and safety of the gas networks. We believe that changes which ignore this are over-simplifying the issues at stake and risk either constraining parties from acting prudently in an emergency or having wider, unintended consequences. Clearly, either outcome would be highly undesirable in a GDE.

We consider that a potential GDE can be separated into two distinct types – a “**rapid**” emergency, where the emergency unfolds extremely quickly giving industry participants very little time to react; and a “**slow**” emergency, where the emergency unfolds over a longer duration (perhaps days, rather than hours). Our view on how these two types of emergency might be defined is set out below.

“Rapid” Gas Deficit Emergency

A rapid GDE could be defined as arising where either:

- (i) there is no time in which to call a GBA; or
- (ii) A within-day GBA has been called;

And the NEC has declared Stage 2 of a GDE.

There has to be recognition that in a rapid emergency, the ability of some Shippers to physically react to the situation will be severely constrained due to the sudden and likely severe nature of the emergency; the cause of which may be completely beyond their control. An example of such a rapid emergency may be a sudden failure of a key entry terminal or gas storage facility on the National Transmission System (NTS).

In our view the market rules must reflect the ability of market participants to react. If a Shipper is unable to react, sharpening price signals further is not going to make any practical difference, other than imposing further financial pain.

In such circumstances, a Shipper may be placed in a short imbalance position by reason of a rapid emergency event and may not be able to source sufficient gas at the NBP to balance their position due to the exceptional market conditions and scarcity of supplies. In this instance, increasing the cashout price and thereby that party's financial exposure is not going to do anything in practical terms to assist with resolution of the emergency situation. An escalating, dynamic cashout price will simply place a large proportion of Shippers in financial difficulty. Therefore, we believe that the focus of the market arrangements in a "rapid" emergency should be on bringing stability to the situation rather than introducing further uncertainty. One way to do this is to freeze the cashout price. Therefore we consider that the current arrangements remain well-justified in the context of a "rapid" GDE.

Ofgem's previous concerns with freezing the cashout price in an emergency have centred on the possibility that the price may, on entering a GDE, be frozen too low to attract non-GB gas supplies and we recognise that this is a possibility. We believe this concern could be addressed by establishing a new role for the UNC Panel to set cashout prices during a GDE, if it transpires that the cashout price is actually too low to attract gas imports following declaration of a Stage 2 GDE. This is an established code process in electricity, where the Balancing and Settlement Code (BSC) panel has the power to set cashout prices during an emergency when directed by the Secretary of State (and following consultation with GEMA)¹. In our view, this change would add into the arrangements an important 'human' factor which should ensure that cashout prices are able to continue to reflect market fundamentals and the actual, practical emergency situation in hand. We do not believe that a pre-set administrated cashout price based on a fixed methodology (i.e. VoLL) could achieve the same level of efficiency.

"Slow" Gas Deficit Emergency

In a slow-burn emergency, we consider that it may be appropriate to apply a dynamic cashout price – i.e. not freeze the cashout price at Stage 2 of a GDE and to keep the market open.

¹ BSC, SECTION G: CONTINGENCIES, Section 4.2:

http://www.elexon.co.uk/documents/bsc_and_related_documents/bsc_-_live_version/section_g_v9.0.pdf
and

BSC, SECTION T: SETTLEMENT AND TRADING CHARGES, Section 1.6

http://www.elexon.co.uk/documents/bsc_and_related_documents/bsc_-_live_version/section_t_v19.0.pdf

A slow emergency could be defined as any other GDE scenario not meeting the criteria suggested above for a “rapid” emergency. Our rationale is that Shippers are, on the balance of probabilities, more likely to have the time and physical ability to react to sharpened price signals in such a situation, unlike the rapid emergency scenario outlined above.

We note that one of Ofgem’s concerns in relation to a dynamic cashout price is the possibility of it rising to extremely high levels if left uncapped. Contrary to Ofgem’s suggestion in the consultation paper, we do not see that using “Value of Lost Load” (VoLL) is a credible method to avoid extreme prices or adverse outcomes. Moreover, there is real risk that VoLL could act as a ‘target’ price in an emergency, with producers and importers potentially holding back gas, safe in the knowledge that they will receive a guaranteed higher price once the emergency is declared and VoLL kicks-in.

We consider that the most efficient and economic approach to avoiding extreme cashout prices, or prices which no longer reflect market fundamentals, would be to introduce the power for the UNC panel to set cash-out prices. If invoked, this could give the Panel the discretion to set cashout prices to fully reflect market fundamentals. In a ‘slow’ emergency, the role of the Panel could be invoked automatically, for instance, where the NBP traded volumes fall below a certain threshold (churn-rate), which would suggest that the market has, or is close to, completely drying up. At this point, the purpose of a dynamic cashout price is meaningless, if there is no further trading to be done and cashout has then to be set at a realistic level to avoid it becoming excessively punitive.

Under the suggested market arrangements outlined above, we do not consider that (for either rapid or slow emergencies) the ECQ mechanism or the post-emergency claims arrangements are required under the UNC. Therefore we advocate that these are removed to avoid confusion and the overlap of incentives and penalties on Shippers.

Role of the National Emergency Coordinator (NEC)

For clarity, we do not believe that the role of the NEC should change, which is an approach suggested within one of Ofgem’s options. The NEC has a critical physical safety role which should not be watered down.

Taking into account our recommended way forward, as outlined above, E.ON offers the following response to the detailed questions posed by Ofgem in the consultation document:

CHAPTER 3

Question 1: Have we captured the appropriate range of options for reform of the gas emergency arrangements? Are there other options that should be considered?

Although the consultation paper only considers a limited set of options, the SCR workshop process has raised considerably more key issues which were not necessarily recognised in the document. Our concern remains that although noted, due to the limited time available, some key issues (e.g. credit and efficacy of existing code mechanisms such as ECQ) were examined in insufficient detail.

Given the number of new issues raised through the workshop process, we do not believe Ofgem should focus only on the three options for reform it has set out and should not be afraid to adapt or discard some of the elements within the options it has set out, based on industry feedback.

In our view, the most notable omission from the consultation document is a detailed consideration of the differences between a “rapid” and a “slow” GDE and whether separate market rules or arrangements should apply. We believe Ofgem should consider this issue in much more detail and may wish to use E.ON’s recommended way forward as a starting model for further discussion.

Question 2: Of the three options presented, which do you prefer? Why?

We do not believe that any of the three options offer a genuine, measurable improvement over the current arrangements, particularly as they attempt to cover all types of GDE with a single set of rules.

We believe there is some merit in aspects of Option 1 – i.e. a dynamic cashout price, but only in a “slow” emergency. In reality, we believe this is the most likely type of GDE, so the reasonable market expectation is that a dynamic cashout price will apply and Shippers would be expected to plan accordingly.

Option 2 proposes to suspend Shipper-to-Shipper trading but continue with a dynamic cashout price and appoint NGG as the sole purchaser of non-GB gas supplies. We do not consider this option is desirable since preventing shipper to shipper trading would prevent Shippers from balancing and taking actions which might help resolve the emergency situation.

Option 3 proposes to continue with Shipper to Shipper trading, freeze the cashout price and appoint NGG as the sole purchaser of non-GB gas supplies. We consider that this option is likely to have the most effect in a rapid emergency, since the frozen cashout price will bring a degree of stability. However, we are unsure of the benefits of NGG acting as a sole purchaser of gas and how the costs might be recovered after the GDE.

Question 3: What is the appropriate role for NGG in an emergency?

National Grid could have a number of important roles in a GDE. For instance, post Stage 2, NGG could place locational bids on the OCM to stimulate trade and attract gas to GB at the points of the NTS where it is needed most. As far as we are aware, NGG is already able to exercise this power but has never done so; so any change in this area could be focused on clarifying National Grid's role in an emergency and how NGG actions would potentially feed into the cashout price.

One idea raised during the workshop stage was an obligation on NGG to contract ahead of time with large customers for demand reduction, in effect, to help avoid a GDE and for some form of compensation to be paid as a result. The purpose would be to encourage more demand-side response. An obligation on NGG to contract with customers could also include National Grid recording and maintaining customer contact details. This would also replicate some existing electricity processes for standing reserve.

Any potential tender must include both gas generators and large (VLDM) I&C customers. The primary incentive to participate would be that failing to do so would risk customers not receiving compensation in the event that their gas supply is curtailed. A similar model already exists in the market arrangements for NGG Operating Margins (OM) requirements, where NGG can tender on an annual basis with generators for demand reduction for OM purposes. This process could be extended into a more formalised obligation on NGG to contract on an annual basis for pre-emergency demand reduction purposes². Participants would be free to set their own price for the purposes of the tender, as is the case for OM tendering. This would have the effect of allowing participants to express their "value of lost load" and be compensated at that level, if interrupted. This would need to be supported by an option and exercise contract, in-line with the current OM arrangements.

To avoid undermining the market's efforts to manage the situation, it would also be important to introduce a trigger mechanism to prevent NGG from exercising such contracts prematurely or for other, non-emergency reasons. One possible trigger could be a GBA (or a re-defined version of it – e.g. "GBA Demand"). An equivalent in electricity would be the existing "NISM" and "Demand Control" warning processes.

² Similar pre-emergency "reserve" arrangements also exist in electricity – e.g. 'Short-Term Operating Reserve' (STOR).

Finally, we are concerned that Ofgem may be contemplating further auction mechanisms in this area. It is worth noting that the OM tender arrangements work well without the need for an auction and layering the gas emergency arrangements with further complexity is likely to undermine the potential success of any new market mechanism in this area.

Question 4: Do you have any comments on our initial assessment of the pros and cons associated with each option?

As noted above, we do not believe any of the options outlined by Ofgem offer a 'silver bullet' and it is necessary to mix and match some of the ideas put forward by Ofgem.

We note Ofgem's statement that: *"there are likely to be significant benefits to consumer if there are strong incentives to purchase gas during a gas deficit emergency (GDE), up to the value that customers place in their gas supplies (the 'value of lost load' or 'VoLL')"*. This statement assumes that there is actually gas available to buy. The main reason for the emergency may actually be that the last marginal therm of gas has been sold and there is simply no more gas to put into the system. In this situation, VoLL (or indeed a higher cashout price) becomes meaningless as Shippers are physically unable to trade out their position. This point is omitted from the list of "cons" in respect of unfrozen cashout and VoLL.

It is also worth noting that ultimately, Shipper to Shipper trading in any given situation is dependent upon each Shipper's availability of credit. In an emergency, credit lines are likely to be eaten into very quickly, particularly if there is rapidly escalating wholesale gas price. Furthermore, APX would be impacted by a dynamic cashout price, which would also affect their credit position and ability to facilitate trades on the OCM.

Question 5: Are there any safety case implications associated with each option?

Since Shippers are not able to see Transporter's safety cases we are not in a position to offer any specific views; however, it would seem reasonable to assume that any change to the market arrangements will require review and input from the HSE to ensure implementation would not lead to any deterioration in levels of overall system or public safety.

Question 6: What benefits would dynamic cash-out bring relative to the post emergency claims arrangements?

Relative to the post-emergency claims process, the only real advantage of a dynamic cashout price (in a slow emergency) is that the price and therefore costs are known upfront.

The post-emergency claims process may have introduced a degree of uncertainty into the arrangements due to the complexity and retrospective nature of it.

We do not believe either process has a place in the arrangements for “rapid” emergencies, but can see that a dynamic cashout price in a slow emergency could be preferable to the current frozen cashout price plus post-emergency claims process; primarily because it would not involve any retrospective adjustment in charges for Shippers.

CHAPTER 4

Question 1: Are there any reasons why industry might not respond adequately to sharper price signals, thus delivering sub-optimal security of supply? How could these be overcome?

As noted above, sharper price signals only work when market participants are able to respond. It is for this reason we believe that dynamic cashout prices should not apply in a rapid emergency, where Shippers ability to respond may be physically constrained and no commercial incentives or penalties would change that. If there is no more gas left to physically supply the system, short-term price signals are meaningless.

We are unclear what “sub-optimal” security of supply actually means or where there is evidence of it. There is also no defined security of supply standard described in the consultation document so it is difficult to understand what level of security of supply Ofgem considers is sufficient (or insufficient). There needs to be a clearly articulated standard against which the industry can be measured, before we can even begin considering obligations in respect of security of supply.

It should also be clear that no prudent Shipper would ever want to deliberately enter an emergency. The unknown duration and costs pose significant risks which could result in financial failure for any Shipper. For instance, a Shipper may enter an emergency in a long position but may find the emergency lasts much longer than expected or further adverse events occur (e.g. failure or outage of a major gas storage facility) which could then move that Shipper into a short position in an already desperately short market. No Shipper can ever have certainty of the precise outcome of an emergency situation and therefore deliberately creating or extending an emergency is in no Shipper’s best interests.

Question 2: What are the likely barriers to attracting gas imports during a GDE? Could these barriers be overcome?

If it was only GB were facing a GDE, it is reasonable to assume, all things being equal, that gas will flow to the UK where the price is higher here than in other markets. However, if GB is facing a GDE in parallel with other countries in Europe or worldwide, it cannot be assumed

that price alone will attract gas to GB. Gas storage and public service obligations in other countries may prevent gas from flowing to GB. In this case, price alone will not overcome the potential problem of attracting imports in an emergency, since gas flows may be constrained by contractual or legal obligations in other countries, or indeed the absence of physical gas supply due to high demand and / or a supply infrastructure failure.

Question 3: Do you think that the risks associated with sharpening price signals make it necessary to apply additional obligations on relevant parties?

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Question 4: If enhanced obligations were applied, to whom should they be applied and why?

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Question 5: How could obligations be designed and enforced?

If Ofgem believes additional risks are created just by “sharpening price signals” this surely suggests that introducing this change could result in worse outcomes than under the current rules?

Overall, we do not see any benefit in applying further obligations on Shippers when the market has proven its ability to respond well. Shippers are in the best position to assess their own risks and manage and hedge them accordingly through a diverse range of tools, such as gas storage. Obliging Shippers to manage their risks in a particular way risks many unintended consequences and is likely to be less efficient and therefore more costly, ultimately, for the consumer. Enhanced obligations on Shippers should be seen as a last resort and the market should be encouraged to deliver without undue intervention.

We believe there may be a case for considering enhanced obligations on NGG – either clarifying their role in placing locational bids on the OCM or contracting (through Shippers) with customers for demand reduction in a GDE. We believe NGG is in the best position to undertake these particular roles of behalf of the industry. Any change to NGG obligations would be best achieved through a licence change, thereby giving them the appropriate authority and clarity of position.

Question 6: What are the risks and potential unintended consequences associated with placing enhanced obligations on parties to ensure security of supply? Can these be overcome?

Without specific proposals it is difficult to discuss in any meaningful way what the unintended consequences of particular obligations may be. A requirement to hold a certain amount of gas in-store has been discussed in general terms in the workshops. Any such obligation which requires significant amounts of gas to be physically held in-store irrespective of market

price signals will distort the wholesale market. Moreover, a gas storage obligation may also provide no additional security of supply if the emergency is triggered, for instance, by failure of the gas storage facility where the gas required to be held, is stored.

CHAPTER 5

Question 1: Have we captured the feasible range of costs and benefits for inclusion in an impact assessment?

Through the workgroup stage Ofgem has stated that “*prevention is better than cure*” in terms of the GB gas emergency arrangements. Whilst we fully agree with this statement, it is equally important to seriously consider the worst-case scenario of actually entering a GDE and the impact (particularly financial) that this could have on market participants. It would not be credible to create a set of arrangements so penal that they effectively cripple the market if a GDE ever does happen, thereby extending and complicating the emergency even further.

The potential cost of compensation and the funding source of this is not considered in detail in the consultation paper. Using figures quoted in the workshops of £2 - £52 p/th, the cost of compensating an entire supply portfolio of customers would run into £millions and eventually £billions in a long duration emergency. Serious thought therefore needs to be given to the cash-flow implications of any potential compensation scheme, alongside the difficult issue of who should actually pay for it.

Although we agree that disconnecting firm customers should not be considered a “free” option, we do not believe this is a realistic or credible concern in terms of domestic customers. By ensuring rapid demand reduction from both generation and I&C load, we believe the chances of domestic load interruption is minimal. The critical public safety and physical restoration issues associated with widespread domestic load shedding makes it far from a “free option”. As noted in the workshops, it could potentially take *months* to restore gas supplies to some parts of the distribution networks. The reputational damage to an affected Shipper (who also has no control over the speed at which customers are re-connected by the distribution network) would be severe. Therefore getting to this stage of an emergency is already extremely undesirable for all physical Shippers.

TECHNICAL ANNEX - Value of Lost Load (VoLL)

E.ON does not believe that VoLL is a realistic or workable concept for use in the GB gas market arrangements and we fail to see what it genuinely would add, other than unnecessary complexity. Although it may be a valid economic principle, it is mired in difficulties in practice with finding the appropriate level for the diverse range of customers including generators, domestic, SME and I&C customers (both Daily Metered and Non-Daily Metered). We do not

consider that, with the arrangements outlined in our introduction and enhanced demand side response, VoLL is required in the arrangements.

Question 1: Would it be appropriate to have multiple administrative VoLL settings for different customer groups? Why/ why not? How are VoLL estimates likely to vary between customer groups?

Clearly, VoLL would vary according to each customer's individual needs and situation and would also be influenced by externalities such as weather and temperature. Therefore, it is reasonable to assume that VoLL will almost certainly be different for every single customer.

In practice, each domestic customer may have a different VoLL, but given that they currently do not have any way to physically stop taking gas (in the absence of metering technology which would allow them to do this) and the network integrity issues associated with customers turning their supplies on and off, it would not be realistic to assume domestic customers are able to 'express' their VoLL.

Question 2: For a customer group, how should we determine where in the range of estimates (i.e. VoLLmax, VoLLaverage or VoLLmin) we should apply a single administrative VoLL setting?

This adds significant complexity for no discernible benefit and the economic theory simply does not reflect physical reality.

Question 3: Should the compensation payments to disconnected firm customers (based on VoLL) change with the duration of the interruption and the season in which the interruption occurs?

Under all other existing, similar market mechanisms (DN interruption, OM), a single value is set, irrespective of season and weather. Over-complicating the market arrangements will lead to unintended or perverse outcomes.

If the GDE occurred by reason of a *force majeure* event, we do not believe that compensation should be payable to any customer.

Question 4: What are the advantages and disadvantages of various methods for estimating VoLL?

As we do not support the implementation of VoLL into the arrangements we do not have any particular view on how it should be calculated, other than it should be kept as simple as possible so that market participants are able to understand the effect it would have.

Question 5: What sort of compensation arrangements should be used to apportion the costs of compensation between shippers?

A gas emergency is different from a localised transportation constraint where a small proportion of total demand is likely to be affected. Under Stage 3 of an emergency, the NEC will be instructing widespread firm load shedding, potentially involving entire Distribution Networks. It would be perfectly possible for a large Shipper to accrue £millions (and potentially £billions) of compensation liability in the event of this happening. Aside from the huge financial liability this could create, it seems highly unreasonable that a Shipper should have to pay compensation to customer if they played no part in creating the gas emergency and acted prudently throughout. Therefore it would seem sensible to target any compensation costs on short Shippers. However, those Shippers that caused the GDE may not be the same Shippers which are short, which then leads us to question whether costs of compensation should actually be imposed on short Shippers or only on those who caused it. Apportioning blame post-emergency is likely to be an extremely complex and fraught process and the ultimate and highly undesirable outcome could be Shippers disputing in court whose responsibility the GDE was and therefore whether they ought to be paying very significant compensation.

An obligation to pay compensation to each customer in the event of a gas emergency will create a significant barrier to market entry for new entrants and in the event of the failure of any single Shipper their financial obligations will be passed to the remaining Shippers. Overall, we believe that the customer compensation issue, particularly for domestic customers is a broader market design issue that goes beyond the emergency cashout debate. Therefore any changes made in this area need very careful consideration, particularly in respect of wider competition issues.

I hope that the above comments prove useful. Should you wish to discuss our response in any further detail, please do not hesitate to contact me on T: 02476 181421.

Yours sincerely,

Richard Fairholme (by email)

Trading Arrangements

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